LaSalle Generating Station
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Exelon Nuclear

October 14, 2009

10 CFR 50.73

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

LaSalle County Station, Unit 2
Facility Operating License No. NPF 18
NRC Docket No. 50-374

Subject: Licensee Event Report

In accordance with 10 CFR 50.73 (a)(2)(iv)(A), Exelon Generation Company, (EGC), LLC, is submitting Licensee Event Report Number 09-001-00, Docket No. 050-374.

Should you have any questions concerning this letter, please contact Mr. Terrence W. Simpkin, Regulatory Assurance Manager, at (815) 415-2800.

Respectfully,

David P. Rhoades
Plant Manager
LaSalle County Station

Attachment: Licensee Event Report

cc: Regional Administrator - NRC Region III
NRC Senior Resident Inspector - LaSalle County Station

IE22
NRR

NRC FORM 366 (9-2007) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 08/31/2010

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
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4. TITLE
Main Turbine Trip and Reactor Scram due to Digital Electro-hydraulic Control Circuit Card Failure

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
										05000
08	15	2009	2009	- 001 -	00	10	14	2009	FACILITY NAME	DOCKET NUMBER
										05000

9. OPERATING MODE
1

10. POWER LEVEL
100

11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: *(Check all that apply)*

- ☐ 20.2201(b)
- ☐ 20.2201(d)
- ☐ 20.2203(a)(1)
- ☐ 20.2203(a)(2)(i)
- ☐ 20.2203(a)(2)(ii)
- ☐ 20.2203(a)(2)(iii)
- ☐ 20.2203(a)(2)(iv)
- ☐ 20.2203(a)(2)(v)
- ☐ 20.2203(a)(2)(vi)
- ☐ 20.2203(a)(3)(i)
- ☐ 20.2203(a)(3)(ii)
- ☐ 20.2203(a)(4)
- ☐ 50.36(c)(1)(i)(A)
- ☐ 50.36(c)(1)(ii)(A)
- ☐ 50.36(c)(2)
- ☐ 50.46(a)(3)(ii)
- ☐ 50.73(a)(2)(i)(A)
- ☐ 50.73(a)(2)(i)(B)
- ☐ 50.73(a)(2)(i)(C)
- ☐ 50.73(a)(2)(ii)(A)
- ☐ 50.73(a)(2)(ii)(B)
- ☐ 50.73(a)(2)(iii)
- ☒ 50.73(a)(2)(iv)(A)
- ☐ 50.73(a)(2)(v)(A)
- ☐ 50.73(a)(2)(v)(B)
- ☐ 50.73(a)(2)(v)(C)
- ☐ 50.73(a)(2)(v)(D)
- ☐ 50.73(a)(2)(vii)
- ☐ 50.73(a)(2)(viii)(A)
- ☐ 50.73(a)(2)(viii)(B)
- ☐ 50.73(a)(2)(ix)(A)
- ☐ 50.73(a)(2)(x)
- ☐ 73.71(a)(4)
- ☐ 73.71(a)(5)
- ☐ OTHER

Specify in Abstract below or in NRC Form 366A

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME	TELEPHONE NUMBER *(Include Area Code)*
Jeff Miller, Senior Manager Plant Engineering	815-415-3801

13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
E	JJ	VCMI	G080	Y					

14. SUPPLEMENTAL REPORT EXPECTED

☐ YES *(If yes, complete 15. EXPECTED SUBMISSION DATE)* ☒ NO

15. EXPECTED SUBMISSION DATE

MONTH	DAY	YEAR

ABSTRACT *(Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)*

On August 15, 2009, at 1606 hours (CDT), Unit 2 was at 100% power performing weekly Main Turbine overspeed surveillance testing. During the surveillance, the Main Turbine unexpectedly tripped on an overspeed signal from the Digital Electro-Hydraulic Control (DEHC) system, causing a reactor scram.

The safety significance of the event was minimal. The speed of the Main Turbine was confirmed to have been normal at the time of the trip. All control rods fully inserted, and all systems responded as expected to the scram.

The cause of the Main Turbine trip was a failed communication chip on the VCMI card in the DEHC system. The root cause of the event was the failure to adequately understand the impact of a diagnostic alarm from the VCMI card, due to a lack of vendor information.

The failed card was replaced. Other corrective actions include a review of all DEHC alarms to determine their potential impact on plant operations, and revising the DEHC alarm procedures appropriately.

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NARRATIVE

A. PLANT AND SYSTEM IDENTIFICATION

General Electric Boiling Water Reactor, 3489 Megawatts Thermal Rated Core Power

CONDITION PRIOR TO EVENT

Unit(s): 2 Event Date: 8/15/09 Event Time: 1606
Reactor Mode(s): 1 Power Level(s): 100
Mode(s) Name: Power Operation

B. DESCRIPTION OF EVENT

On August 15, 2009, at 1606 (CDT), Unit 2 was at 100% power performing weekly Main Turbine (TG) [TA] overspeed surveillance testing. During the surveillance, the Main Turbine unexpectedly tripped on an overspeed signal from the Digital Electro-Hydraulic Control (DEHC) [JJ] system, causing a reactor scram.

The safety significance of the event was minimal. The speed of the Main Turbine was confirmed to have been normal at the time of the trip. All control rods fully inserted, and all systems responded as expected to the scram.

Troubleshooting identified that the cause of the trip was a failed communication chip on a VCMI card in the DEHC system. The VCMI card was replaced, and the Unit was restarted and synchronized to the grid on August 19, 2009. The Unit returned to full power at 2300 CDT on August 20, 2009.

An Emergency Notification System call was made at 1906 CDT on August 15, 2009, in accordance with 10 CFR 50.72(b)(2)(iv)(B) due to an event or condition that resulted in the actuation of the reactor protection system when the reactor was critical.

C. CAUSE OF EVENT

Troubleshooting identified that the cause of the trip was a failed communication chip on a VCMI card in the DEHC system. At the time of the trip, there was a diagnostic alarm in, indicating that there was a degraded communication link between the three DEHC control modules. This degraded condition, in combination with inserting a half trip signal during the overspeed surveillance test, completed the turbine trip logic, resulting in a turbine trip/reactor scram.

The diagnostic alarm had been received approximately one week prior to the event. Engineering personnel evaluated system log messages and vendor information in order to understand the impact of the conditions that would cause the alarm. However, the vendor information failed to provide an adequate description of the alarm logic or its potential risk, which has been determined to be the root cause of this event. Contributing causes included inadequate communication between the Station engineers and the vendor that failed to highlight the overall risk that the degraded condition posed to the station, and

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NARRATIVE

operating alarm response procedures that did not adequately warn the operators of the risk associated with the alarm.

D. SAFETY ANALYSIS

The safety significance of the event was minimal. The speed of the Main Turbine was confirmed to have been normal at the time of the trip. All control rods fully inserted, and all systems responded as expected to the scram.

E. CORRECTIVE ACTIONS

Corrective Actions:

- The failed VCMI card was replaced.

Corrective Action to Prevent Recurrence:

- The DEHC vendor will provide the Station with an improved manual with enhanced information on fault codes and their associated risks.
- DEHC alarms will be evaluated for potential impact, and the appropriate alarm procedures will be revised as necessary.

F. PREVIOUS OCCURENCES

A document review found no previous occurrences of a turbine trip/reactor scram due to an erroneous signal from DEHC.

G. COMPONENT FAILURE DATA

General Electric, VCMI Card IS215VCMIH2CA, Serial No. S15F073